

METHOD FOR PRODUCING NOVEL DNA SEQUENCES  
WITH BIOLOGICAL ACTIVITY

Abstract of the Disclosure

5 A method of obtaining an oligonucleotide capable of carrying out a  
predetermined biological function. A heterogeneous pool of oligonucleotides,  
 $x + y + z$  nucleotides in length, is first generated. Each oligonucleotide has a 5'  
randomized sequence,  $x$  nucleotides in length, a central preselected sequence,  $y$   
nucleotides in length, and a 3' randomized sequence,  $z$  nucleotides in length. The  
10 resulting heterogeneous pool contains nucleic acid sequences representing a  
random sampling of the  $4^{x+z}$  possible sequences for oligonucleotides of the stated  
length. A random sampling of the heterogeneous pool of oligonucleotides is  
introduced into a population of cells that do not exhibit the predetermined  
biological function. The population of engineered cells is then screened for a  
15 subpopulation of cells exhibiting the predetermined biological function. From that  
subpopulation of cells is isolated an oligonucleotide containing the preselected  
sequence and capable of carrying out the predetermined biological function.

NOT AVAILABLE COPY